

III. Remarks

Claims 1, 2 and 4-20 were previously pending.

Claims 1, 2 and 4-20 have been maintained in their previously-presented form.

As a result, claims 1, 2 and 4-20 remain pending.

Consideration of this application in light of the following remarks is respectfully requested.

Rejections Under 35 U.S.C. §103(a)**Claims 1, 2 and 4-18**

Claims 1, 2 and 4-18 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 6,491,823 to Safir et al. ("Safir '823") in view of each of U.S. Patent No. 5,702,950 to Tajima ("Tajima '950"), U.S. Patent No. 6,607,662 issued to Ikeda et al. ("Ikeda '662"), and Deschamps et al., *Rapid Purification of Recombinant Green Fluorescent Protein Using the Hydrophobic Properties of an HPLC Size-Exclusion Column*, Protein Expression and Purification 6, pp. 555-568 (1995) ("Deschamps"). This rejection is respectfully traversed.

Claim 1 recites: A carrier housing/processing apparatus comprising;

one or a plurality of carriers fixed or able to be fixed with chemical substances such as ligands; a carrier housing section which is provided with a fluid inlet/outlet and which accommodates said carrier; a drawing/discharging section configured to draw a fluid through said inlet/outlet and into said carrier housing section, and then discharge the fluid out of said carrier housing section through said inlet/outlet; and a transferring section which transfers said carrier housing section including said inlet/outlet relatively with respect to containers provided outside, wherein

said carrier is formed in a size or a shape not allowing said carrier to pass through said inlet/outlet, and in a state of holding said carrier in said housing section, by self-weight of said carrier, frictional force between said carrier and the inner wall of said housing section, or remote force from outside with respect to said carrier, a fluid is drawn and discharged,

wherein said carrier housing section further comprises an opening having a size enabling said carrier to pass through, and said drawing/discharging section is provided with a nozzle which detachably connects with said opening, and said carrier is formed in a size capable of passing through said opening but not capable of passing through said inlet/outlet.

As the PTO recognizes in MPEP §2142:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

The Examiner clearly cannot establish a *prima facie* case of obviousness in connection with claim 1 for the following reasons.

35 U.S.C. §103(a) provides that:

[a] patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains ... (emphasis added)

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, Safir '823, Tajima '950, Ikeda '662 and Deschamps, alone or in any combination, do not disclose the subject matter of claim 1, as recited above.

More particularly, none of Safir '823, Tajima '950, Ikeda '662 and Deschamps discloses, in the context of claim 1, a drawing/discharging section configured to draw a fluid through said inlet/outlet and into said carrier housing section, and then discharge the fluid out of said carrier housing section through said inlet/outlet.

With apparent respect to this limitation recited in claim 1, the Examiner asserts that the injection valve 100 of Safir '823 is a "fluid inlet/outlet," and further asserts that fluid is delivered "to the chromatographic column [102] via the injection valve, i.e., a drawing/discharging section is configured to draw and discharge fluid through the inlet/outlet." (Office Action mailed August 7, 2008, page 4, lines 9-12).

Assuming for the purpose of argument that this characterization of Safir '823 by the Examiner is correct, Safir '823 still only discloses a system wherein fluid flows through the

chromatographic column 102 in a one-way direction, that is, from the injection valve 100 and through an inlet port of the chromatographic column 102, through the column 102, out of the column 102 through the effluent port of the column 102, and to a waste container 140 (see, e.g., Safir '823, Fig. 2A or 6).

Although the drawing/discharge section of Safir '823 draws a fluid through the injection valve 100 and into the column 102, the drawing/discharge section does not discharge the fluid out of the column 102 through the injection valve 100, as required by claim 1. Instead, the section discharges the fluid out of the column 102 through an effluent port and to the waste container 140. Therefore, it is impossible to render the subject matter of claim 1 as a whole obvious based on any combination of the applied references, and it is clear that the Examiner has not borne the burden of factually supporting a *prima facie* case of obviousness.

Notwithstanding the above, it is further noted that MPEP §2143.03 provides that:

[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art. (quoting *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970))

Here, the Examiner has not shown that all words in claim 1 have been considered. For example, claim 1 requires "a drawing/discharging section configured to draw a fluid through said inlet/outlet and into said carrier housing section, and then discharge the fluid out of said carrier housing section through said inlet/outlet." In contrast, the Examiner has only shown that "a drawing/discharging section is configured to draw and discharge fluid." (Office Action mailed August 7, 2008, page 4, lines 11 and 12). Therefore, for this reason alone, it is respectfully submitted that the Examiner has not factually supported a *prima facie* case of obviousness.

In further contrast to claim 1, none of Safir '823, Tajima '950, Ikeda '662 and Deschamps discloses, in the context of claim 1, a transferring section which transfers said carrier housing section including said inlet/outlet relatively with respect to containers provided outside.

With respect to this limitation, the Examiner sets forth the following two assertions:

- 1) "As written, claim 1 does not require that the carrier housing itself be moved."
- and
- 2) "The claim requires only that the housing with its inlet/outlet be transferred with respect to outside containers."

(Office Action mailed August 7, 2008, page 8, lines 1-4).

It is respectfully submitted that these two assertions are **clearly contradictory**. Although the former assertion is incorrect, the latter assertion is correct since claim 1 does indeed require a transferring section **which transfers said carrier housing section** including said inlet/outlet relatively with respect to containers provided outside.

Notwithstanding this contradiction, the Examiner asserts that, by disclosing an auto sampler that can be programmed to automatically sample different polymers one after another to serially load the polymers into the system, Safir '823 somehow discloses "a transferring section for the transfer of the inlet/outlet with respect to containers provided outside." (Office Action mailed August 7, 2008, page 4, lines 14-17). However, the Examiner characterizes the inlet/outlet recited in present claim 1 to be the injection valve 100 of Safir '823 (see Office Action mailed August 7, 2008, page 4, line 9). Safir '823 does **not** disclose the transfer of the injection valve 100 with respect to outside containers. Therefore, Safir '823 does not disclose a transferring section which transfers said carrier housing section including said inlet/outlet relatively with respect to containers provided outside, as required by claim 1. For this reason alone, it is impossible to render the subject matter of claim 1 as a whole obvious based on any combination of the applied references, and it is clear that the Examiner has not borne the burden of factually supporting a *prima facie* case of obviousness.

It is noted that Safir '823 discloses that a probe tip 201 is indeed transferred with respect to outside containers (see, e.g., Fig. 4 of Safir '823). Assuming for the purpose of argument that the probe tip 201 of Safir '823 can be characterized as the fluid inlet/outlet of claim 1, Safir '823 still does not disclose that fluid is drawn through the probe tip 201 and into the chromatographic column 102, and then is discharged out of the column 102 through the probe tip 201, as also required by claim 1.

Claims 2 and 4-13 depend from and include the subject matter of claim 1, and therefore are allowable for at least the same reasons as noted above with respect to claim 1.

Claim 14 requires, *inter alia*, "drawing fluid through said inlet/outlet from external containers by a drawing/discharging section" and "discharging only said fluid through said inlet/outlet by said drawing/discharging section." Therefore, claim 14 is allowable for at least the same reasons as noted above in connection with the limitation of claim 1 reciting a drawing/discharging section configured to draw a fluid through said inlet/outlet and into said carrier housing section, and then discharge the fluid out of said carrier housing section through said inlet/outlet.

Claim 15 depends from and includes the subject matter of claim 14, and therefore is allowable for at least the same reasons as noted above with respect to claim 14. Moreover, claim 15 further requires "a transferring step for transferring said inlet/outlet relatively with respect to containers provided outside." Therefore, claim 15 is also allowable for at least the same reasons as noted above in connection with the limitation of claim 1 reciting a transferring section which transfers said carrier housing section including said inlet/outlet relatively with respect to containers provided outside.

Claims 16-18 depend from and include the subject matter of claim 14, and therefore are allowable for at least the same reasons as noted above with respect to claim 14.

For the foregoing reasons, it is requested that the rejection of claims 1, 2 and 4-18 under 35 U.S.C. §103(a) over Safir '823 in view of each of Tajima '950, Ikeda '662 and Deschamps be withdrawn.

Claims 1, 2, 4, 5, 8 and 12-20

Claims 1, 2, 4, 5, 8 and 12-20 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,895,631 to Tajima ("Tajima '631"). This rejection is respectfully traversed.

As noted above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, Tajima '631 does not disclose the subject matter of claim 1, as recited above.

More particularly, Tajima '631 does not disclose, in the context of claim 1, an apparatus wherein a carrier is formed in a size or a shape not allowing said carrier to pass through said inlet/outlet. This lack of disclosure is confirmed by the Examiner (see Office Action mailed August 7, 2008, page 9, lines 12 and 13); however, the Examiner asserts that one of skill in the art would be motivated to modify Tajima '631 so as to provide magnetic particles not being able to pass through the inlet-outlet in order to avoid loss of magnetic beads and therefore loss of captured material (see Office Action mailed August 7, 2008, page 9, lines 17-19). **One of skill in the art would NOT be so motivated because the proposed modification of Tajima '631 renders Tajima '631 unsatisfactory for its intended purpose.**

More particularly, MPEP §2143.01 provides that:

[t]he proposed modification ***cannot*** render the prior art unsatisfactory for its intended purpose. (emphasis added)

Tajima '631 discloses a reaction liquid containing magnetic particles with DNA or DNA-bonded substance bonded to the surface of the magnetic particles. The magnetic particles with DNA or DNA-bonded substance bonded to the surface thereof are separated from the remainder of the reaction of liquid by drawing or sucking the reaction liquid—including the magnetic particles—from a cell and up into a cylindrical chip via a nozzle (or inlet-outlet), contacting a magnetic body with the cylindrical chip to attract the magnetic particles within the chip to an internal surface of the chip, and discharging the residual liquid back into the cell via the nozzle (or inlet-outlet), thereby separating the magnetic particles from the remainder of the reaction liquid. See, e.g., Tajima '631, col. 17, line 36 through col. 18, line 2.

If Tajima '631 was modified so that the magnetic particles were not able to pass through the inlet-outlet, as required by the rejection, Tajima '631 would be rendered unsatisfactory for its intended purpose because the magnetic particles would no longer be able to be drawn up through the inlet-outlet and into the cylindrical chip, and thus the magnetic particles would not be able to be separated from the remainder of the reaction liquid.

Thus, since this modification of Tajima '631 renders the reference unsatisfactory for its intended purpose, one of skill in the art would not have been motivated to make the claimed invention. For this reason alone, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met.

Claims 2, 4, 5, 8, 12, 13 and 19 depend from and include the subject matter of claim 1, and therefore are allowable for at least the same reasons as noted above with respect to claim 1 and Tajima '631.

Claim 14 requires, *inter alia*, "an inlet/outlet which enables a fluid to pass through but does not enable said carriers to pass through." Therefore, claim 14 is allowable for at least the same reasons as noted above with respect to claim 1 and Tajima '631.

Claims 15-18 and 20 depend from and include the subject matter of claim 14, and therefore are allowable for at least the same reasons as noted above with respect to claim 14 and Tajima '631.

For the foregoing reasons, it is requested that the rejection of claims 1, 2, 4, 5, 8 and 12-20 under 35 U.S.C. §103(a) over Tajima '631 be withdrawn.

Conclusion

It is believed that all matters set forth in the Office Action mailed August 7, 2008, have been addressed. Applicant has made a diligent effort to advance the prosecution of this application by submitting arguments in support of the patentability of claims 1, 2 and 4-20.

In view of all of the above, the allowance of claims 1, 2 and 4-20 is respectfully requested.

The Examiner is invited to call the undersigned at the below-listed telephone number if a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,



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